A collection of open paint cans in various colors including yellow, blue, red, green, and purple, arranged in a circular pattern. A blue banner is overlaid on the top half of the image.

# Wood Finishing Product Range

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## Your Coating Solutions Partner

Sherwin-Williams is a global industrial coatings leader, supporting customers with innovative liquid and powder technologies and extraordinary service. Through an infrastructure dedicated to regional manufacturing and distribution capabilities that span six continents, Sherwin-Williams is a solutions partner with global reach. This brochure covers our wood coating assortment available in Europe.

### Wood finishing solutions

Sherwin-Williams wood finishing solutions allow great flexibility, since they can be adapted and developed to suit your individual needs and circumstances. We place special emphasis on research and development focused on environmentally compliant products and techniques. This has attracted considerable interest on markets all over the world.

Our environmental solutions also demonstrates that it is possible to achieve attractive, lasting surfaces in a rational and cost-effective way – while still showing the greatest possible concern for the environment.

Our ambition is to be a strong but attentive partner. That is why the Sherwin-Williams brand has become a symbol of proximity, personal commitment and advanced technical support, wherever the wood industry needs first-class industrial finishing.

### Environmental compliance

As the earth's resources start to shrink and the ecological equilibrium is threatened, it is natural that environmental issues should acquire greater significance. It is also important that there should be a constructive and innovative environmental commitment on the part of international decision makers and other players in society.

Environmental compliance on nature's terms is a matter of coordinated effort and a global concern – for our own sake and that of future generations.

High priority is assigned to the development of environmentally compliant products and technology. This compliance is a process in which the demands of our clients are matched against the requirements of a good working environment and ecologically sound solutions. Our ambition is to offer products, systems and techniques which combine cost-efficiency and high quality with a good overall environment.

### Combining system solutions

With the Sherwin-Williams assortment we work to meet every challenge in a creative way. Combining system solutions with environmentally compliant technology is a promising development with great potential. More and more of our systems therefore combine the environmental benefits of UV technology with the application flexibility offered by water technology, which also allows for cost-effective production with a high surface finish as the result.

### Research and cooperation

As new discoveries are made, knowledge in the environmental field is constantly being updated, which also affects the orientation of our own research and development. Through close cooperation with clients and business partners all over the world, we seek to satisfy wishes in a global perspective.

We do this with the important aim of working together for solutions that combine the performance you need with ever reduced environmental impact.



## Waterborne paints and lacquers

The Sherwin-Williams waterborne range includes both clear lacquers and pigmented products, designed for furniture and fittings. They are waterborne and are thus kinder to the environment than their solvent-borne counterparts.

These products significantly improve the work environment on the production line, and radically reduce solvent emissions to the outdoor environment.

In general, the waterborne range is very fast-drying. The surface is normally rather thermoplastic, which means that treated items must be handled at temperatures that are lower than is normal for curing products. Good ventilation is crucial when drying waterborne products.

Using the Sherwin-Williams waterborne products, problems with fibre raising and application difficulties can be virtually eliminated. Cross-sanding, for example, can be used to reduced fibre raising, greatly improving the result.

This means that today's Sherwin-Williams waterborne products are suitable for most applications. For substrates that are sensitive to swelling, combining two systems can be a good solution. This also applies to dark substrates.

### The range comprises:

- > Lacroma – waterborne sealers and lacquers.
- > Laqva – waterborne fillers, primers and topcoats.

### Lacroma Waterborne sealers and lacquers

#### Lacroma Seal

Lacroma Seal is a range of fast-drying sealers with excellent sanding properties. These products can be supplied with added white pigment for a lighter finish on substrates such as pine, spruce and birch. They can be applied by spraying, rolling, dipping or by curtain coater.

#### Lacroma Clear

These are clear lacquers which can be supplied in degrees of sheen from matt to glossy. They produce high-bodied surfaces, dry fast and are easy to use in production. They result in a finish which conforms to basic Möbelfakta standards for tabletops. They can be applied by spraying, rolling, dipping or by curtain coater. They can be dried at room temperature or at raised temperatures, as in a convection or IR-curing oven.

#### Lacroma Rustik

Special lacquers that protect stained and unstained surfaces, without being noticeable. They produce the same sheen as untreated wood and can be applied on top of any kind of stain and on most substrates.





## **Laqva** Pigmented waterborne fillers, primers and topcoats

### **Laqva Prime**

Laqva Prime is a range of waterborne primers, for use on fibreboard as well as solid wood. The products are noted for their high-build properties.

Laqva Prime can be applied using most industrial methods and is very easy to sand.

**Laqva Prime is available in several qualities, including:**

- > roller quality with excellent hiding power
- > an all-round spray or curtain primer
- > a variant for extra high-bodied surfaces

### **Laqva Proof**

Laqva Proof is an exclusive range of primers for solid wood. It has the properties of Laqva Prime but with an incorporated mechanism which delays/protects the wood from being discolored from pine knots and tannin from tropical woods.

### **Laqva Fill**

Laqva Fill is a range of waterborne fillers, for roller and manual application. The roller qualities are fast-drying, have high body and give minimal shrinking. A fast-drying filler is used for manual application.

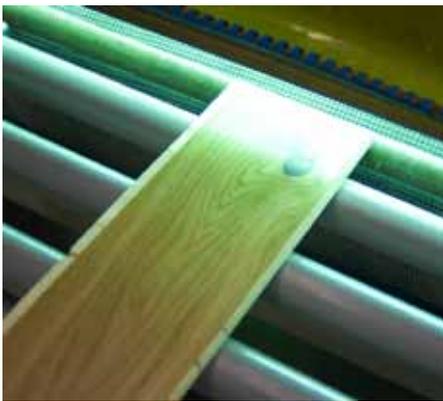
Laqva Fill is very easy to sand.

### **Laqva Top**

These are waterborne topcoats. The products are fast-drying, permit easy production and are available in any degree of sheen from matt to glossy. Most wishes as regards colour can be satisfied. They can be sprayed, curtain coated or applied by roller.

**Laqva Top is available in several qualities, including:**

- > products for industrial finishing of fibreboard, as used for the backs of bookshelves. Also for curtain and roller application. Can be overcoated with waterborne or UV lacquers for enhanced surface resistance
- > a texture quality



## Waterborne UV-curing paints and lacquers

Waterborne UV-curing products are hand-led in roughly the same way as conventional waterborne lacquers, but they offer greater resistance and higher Möbelfakta ratings.

These products require a shorter flash-off time after application, before the surface can be exposed to UV light. The next coat can then be applied. This may be a conventional waterborne product or an additional coat using a waterborne UV-curing product.

### Aqualight

Aqualight is a safe, rapid-drying UV system. It simplifies handling, enhances the end result, and creates the right conditions for a better environment.

With Aqualight, we have overcome the limitations of conventional UV products. There is a logical explanation. Aqualight quite simply combines the potential of new UV technology with the application

flexibility of waterborne technology. This produces a finish and surface resistance fully comparable with conventional finishing techniques.

### For profiled substrates too

One of the main advantages of Aqualight is the greater freedom it gives for finishing a broad range of surfaces, whether profiled or planar. With Aqualight on your application line, results will be consistently good: beautiful, strong and resistant surfaces – down to the smallest detail.

### The environment – first and foremost

Aqualight is a fine symbol of the high priority we give the environment.

Aqualight contains only small amounts of solvents, sparing the environment from unnecessary emissions. Machines and other line equipment can be cleaned with water, which can then be recycled in the production process.

### Safe work environment

No organic solvents means cleaner air. Aqualight gives a safer, more pleasant working environment.

With Aqualight, we have effectively eliminated the risk of skin irritation. This has been demonstrated by impartial toxicological tests conducted by, among others, Scantox in Denmark. Aqualight helps avoid unnecessary allergies and skin problems.



### Cost-effective production

The development of UV technology has resulted in new finishing systems which offer promising production and economic benefits.

Aqualight can be applied in existing facilities with only minor adjustments. You often gain valuable space and manage with little or no investment in new equipment. Easier handling and shorter curing times also mean time gains. You can increase production per unit of time and make it more cost-effective.

### Aqualight Prime

A waterborne primer with high body and very fast water resistance aimed for MDF-substrates.

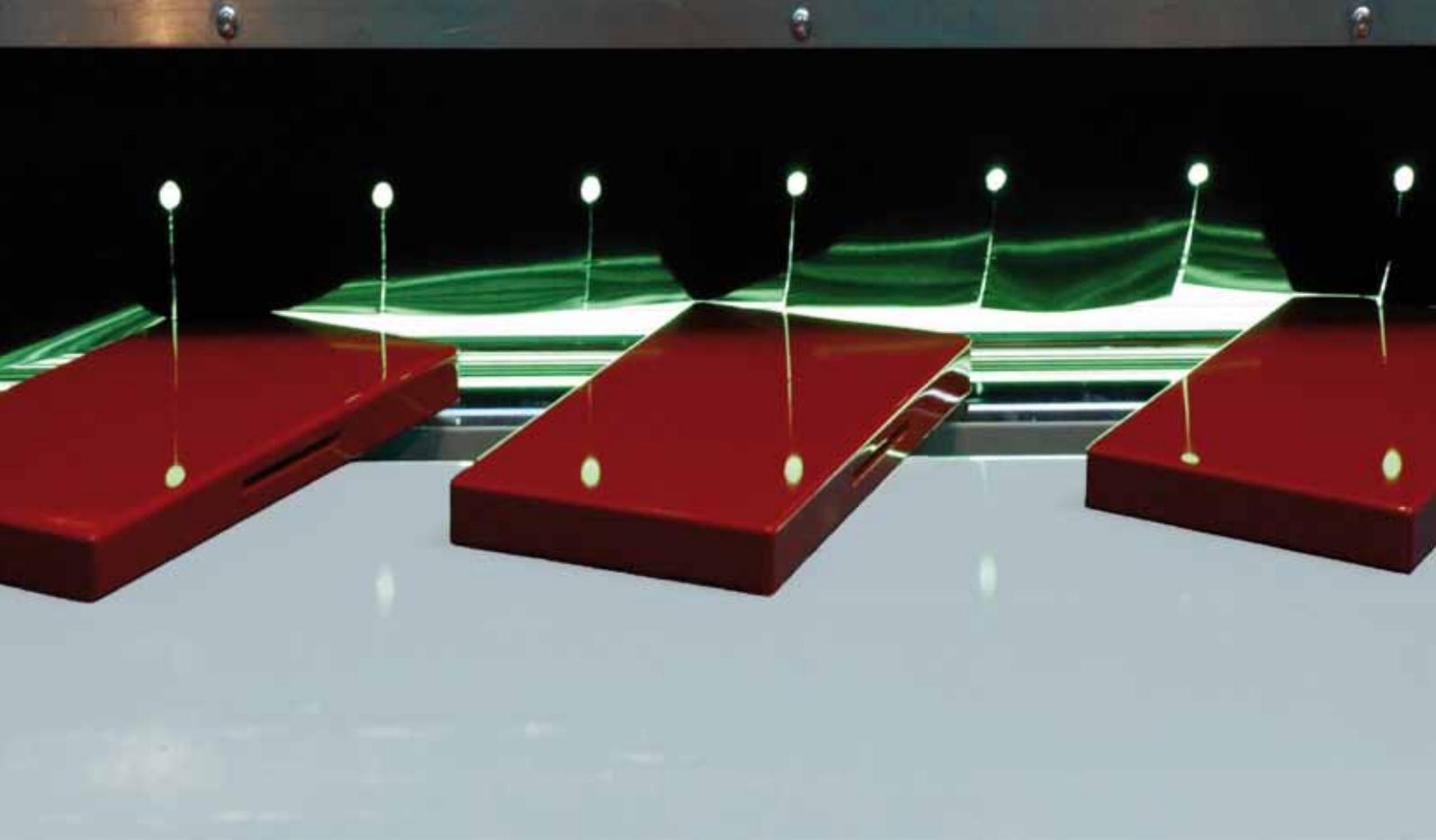
### Aqualight Clear

Waterborne lacquer which ensures good wetting even on dark substrates. It is pH-neutral, which means that you avoid discoloration when surface treating substrates such as oak.

### Aqualight Top

A waterborne paint which, thanks to its high hiding power, can be applied in a single film, unlike conventional UV products.

Aqualight is available for both spray and curtain application, and can be applied on top of waterborne and UV-curing primers.



## UV-curing paints and lacquers

The Sherwin-Williams UV-curing range comprises both paints and lacquers. Most of today's modern industrial finishing processes for furniture and joinery involve the use of UV products. Speed, the limited space requirement for equipment, low running costs, radically reduced solvent emissions and high-quality finishes are just some of the reasons.

UV products contain a binder with a photo-initiator. When the applied coat is exposed to UV light, the initiator absorbs energy and triggers rapid polymerization (curing) of the binder. This split-second process produces highly durable and chemically resistant finishes. Joinery treated with a UV product can be stacked immediately after curing, without any risk of the surfaces sticking to each other. In their basic form, all Sherwin-Williams' UV products are solvent-free.

With new application technology and Sherwin-Williams' advanced product development, UV products can now be used much more broadly than before.

### Beckrolight

#### Acrylate-free primers, sealers and lacquers

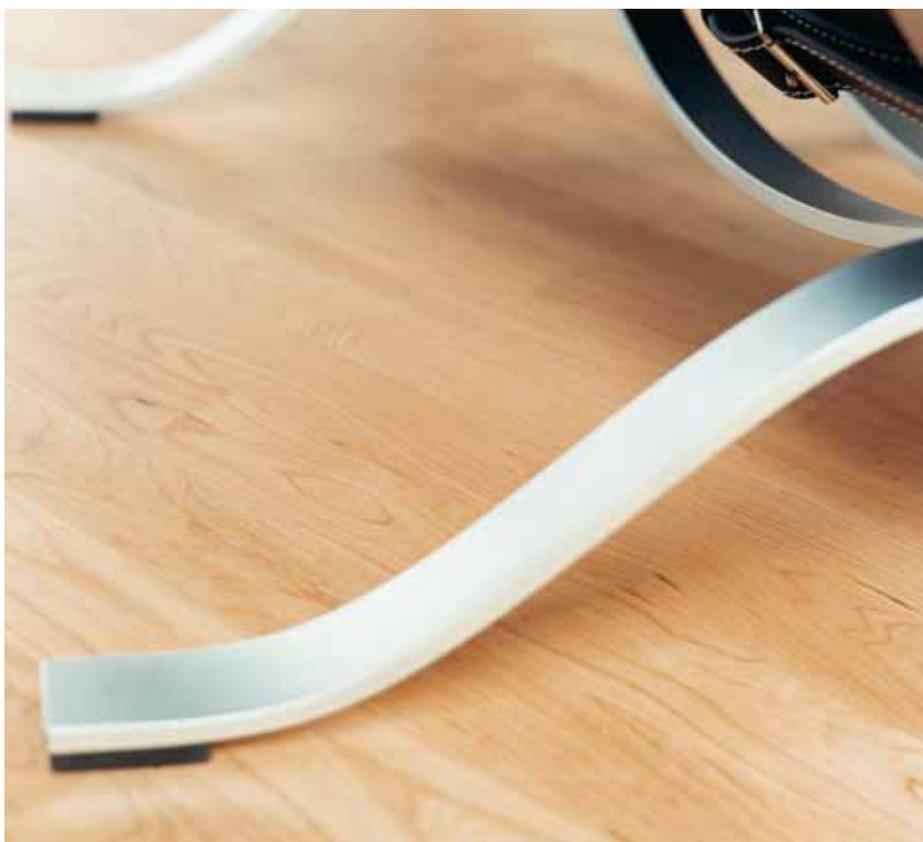
Beckrolight is a unique, acrylate-free UV system which can be introduced on existing UV lacquering lines with no need for modification. Beckrolight is as fast-curing as conventional UV lacquers, so you can maintain line speed when changing to Beckrolight.

#### Durable and resistant finishes

Beckrolight wets the substrate better than conventional UV lacquers. It produces a finish similar to that achieved with the best acid-curing products, ensuring a superior feel. Beckrolight makes it easier to combine

elements which have been coated with different systems while retaining a uniform effect.

Beckrolight produces finishes with good resistance. They withstand heavy wear and chemicals. They are highly resistant to abrasion, scratching and stains.



### **No solvents, no emissions**

When developing Beckrolight, we made personal safety a priority, knowing that conventional UV products can cause skin irritation and allergies if wrongly handled in production.

With Beckrolight, these risks have now been effectively eliminated. This has been demonstrated by impartial toxicological tests, including those conducted by Scantox in Denmark.

The Beckrolight range includes primers, sealers and lacquers, as well as other products.

### **Beckrolight Prime**

Beckrolight Prime is a primer, for roller application on fibreboard. With its high hiding power, this product can be applied in a thin film (15–20 g/m<sup>2</sup>).

Beckrolight Prime is also available in a special optiroller quality, permitting application of a thicker film without causing striation.

### **Beckrolight Seal**

Beckrolight Seal is a range of sealers for roller and spray application. These products feature very high build and are easy to sand.

### **Beckrolight Clear**

Beckrolight Clear is a range of lacquers which give finishes with very good surface resistance. The products are available in sheens ranging from semi-matt to glossy. They can be applied by roller or spray.

### **Beckry**

The Beckry system is highly flexible, and the various products can be combined in many different ways, as well as with other types of surface treatment materials. The series includes products which are non-yellowing and have low monomer levels. Consequently, they are normally easily modified to suit a particular finishing facility and to produce a specific quality finish.

### **Beckry Seal**

Beckry Seal is a range of high built sealers. They offer good adhesion, even to resinous redwood, and have good sanding properties. Beckry Seal products are normally applied using one or more rollers.

### **Beckry Prime**

Primer with good hiding power, designed for roller application. It is normally applied in a thin film (15–20 g/m<sup>2</sup>). A special optiroller quality is available, which produces smooth surfaces even when applied more thickly.

### **Beckry Fill**

Beckry Fill – a one-pack, UV-curing filler, developed primarily as a particle board filler. With modern filling techniques and Beckry Fill, fully acceptable results can be achieved even with lower grades of particle board. Beckry Fill is available as a clear or pigmented filler.

### **Beckry Clear**

The Beckry Clear range of lacquers provides a high finish, resulting in surfaces which meet the exacting Möbelfakta standards. They are available in a range of sheens, from matt to glossy. For smaller lines with few rollers, Beckry Clear can be supplied as a “combi-lacquer”, combining the functions of sealer and lacquer.

### **Beckry Top**

Beckry Top is a paint for roller application. They are applied in a thin film to a maximum of 10 g/m<sup>2</sup>. Beckry Top is also available in a special optiroller quality, which can be applied up to a maximum of 15 g/m<sup>2</sup>. Beckry Top is also available as textured paint.



## Solvent borne paints and lacquers

In the vast majority of our European wood coating assortment we only use mild solvents such as esters and alcohols and we avoid using aromatic hydrocarbons.

### One-pack systems

One-pack systems are often the easiest to work with because of their good application properties and long pot life. Most are fast drying, especially at increased temperatures and some have a built-in hardener that activates on application.

### Two-pack systems

Two-pack systems require a hardener or catalyst to dry/cure. They typically have excellent application, curing and stacking properties in modern application lines and produce hard, chemical-resistant surfaces. Typically, our two-pack systems consist of polyurethane and acid-catalysed products. The largest two-pack group is acid-catalysed products. Using acid-catalysed products is

cost-effective, offering fast curing, chemical resistant, attractive surfaces.

### Futura Clear Lacquers for full, resistant surfaces

It is a one-pack lacquer with built-in hardener and is formaldehyde and isocyanate free.

It also comes as a two-pack lacquer with increased surface resistance. Using Futura Clear is fast and easy and can be supplied in several degrees of gloss and applied using any industrial method.

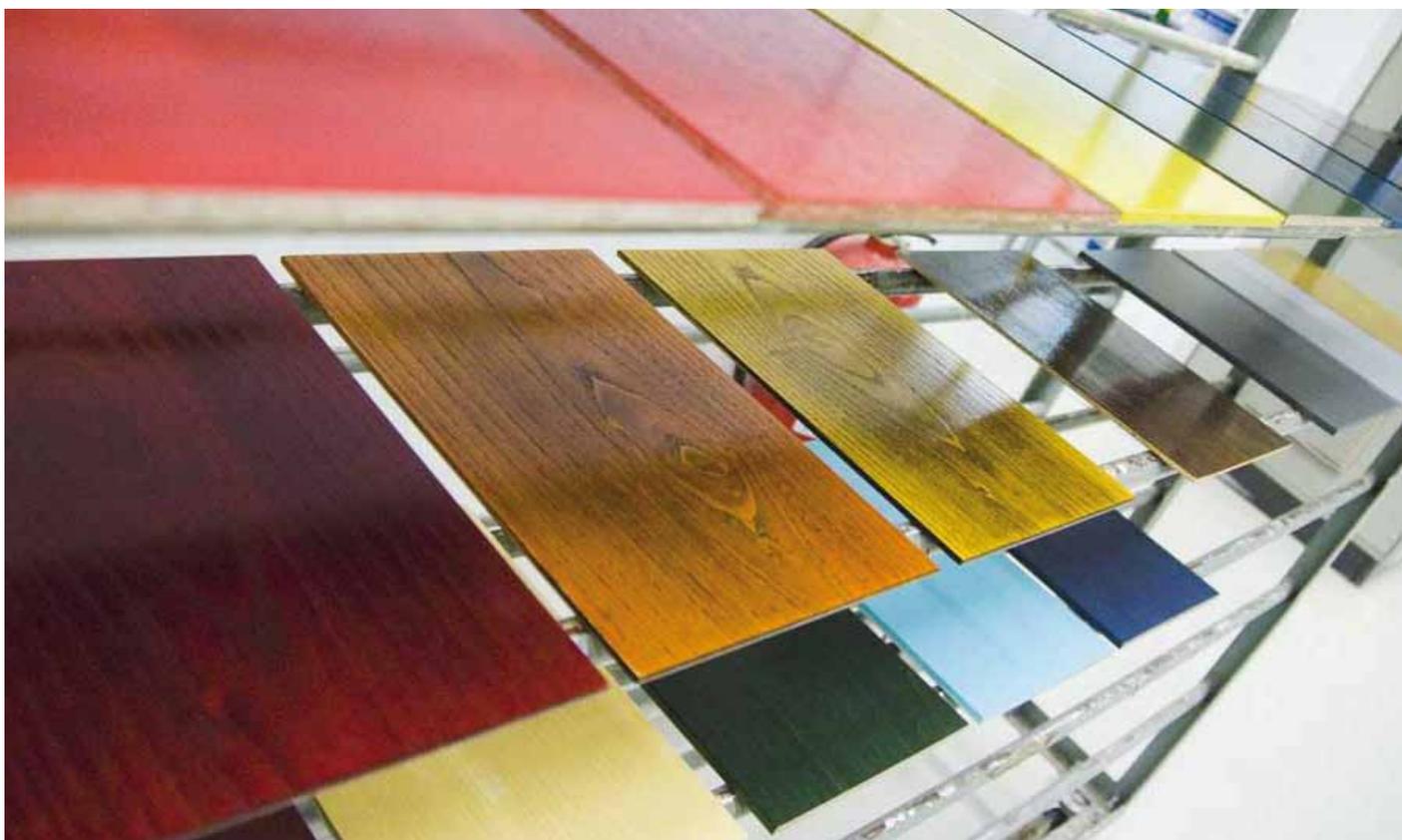
### Natura Clear Lacquers for the natural look

For a natural look Natura Clear is ideal. This one-pack range of lacquers offers invisible

protection against spots and handling and can be used to great effect with Natura Ton. The Natura Clear range is formaldehyde and isocyanate free. With the ability to be applied on any substrate, using conventional industrial methods, these products can also be supplied for electrostatic application.

Natura Clear is fast drying, producing a resistant surface that complies with Möbelfakta demands.

Newly sanded surfaces produce the best results and all low-gloss grades can be brushed to yield a wax-like surface.



## Entré

### Primer, paints and textured paints

Entré is a range of one-pack paints that is formaldehyde and isocyanate free. Easy to handle when treating furniture, the whole range can also be applied using any industrial method.

### Entré Prime

A fast drying, white one-pack primer with built-in hardener and high solids content for high-build properties. Use with Entré Top or Entré Tex for a full surface, one-pack system.

### Entré Top

This range of fast paints can be supplied in any colour and in several degrees of sheen, from matt to glossy. We can also supply Entré Top as a two-pack paint for increased surface resistance and it can be applied over Entré Prime and Sherwin-Williams UV or waterborne primers.

### Entré Tex

A one-pack texture paint that produces resistant surfaces and covers minor defects in the substrate. Supplied in most colours.

## Care

A range of two-pack acid-catalysed sealers, lacquers, primers, paints and textured paints with minimum formaldehyde emission.

### Care Seal

Care Seal are clear sealers for light colour surface treatments.

### Care Clear

Care Clear is a range of lacquers for home and furniture, joinery and maritime fittings that are high-build and have been developed for use with Sherwin-Williams stains. Care Clear can be supplied in several degrees of sheen, from matt to glossy and can be applied using all industrial methods. We can also vary the qualities for special needs, type of line and drying equipment.

#### Care Clear can be supplied as:

- > Electrostatic qualities with high thixotropy to counteract running
- > Line lacquers for extremely short lines
- > Lacquers for extra high-bodied surfaces
- > Non-yellowing lacquers

## Care Prime

Care Prime is a range of primers that are high-build and fast drying. They are easy to sand and can be overcoated with most types of paints and lacquers.

### Care Top

Care Top is a range of paints producing a highly resistant, high-quality finish. Being all-round products, they suit most substrates and application methods, furnishing you with a rational, cost-effective method, using just a few products.

Care Top can be supplied in any colour and any degree of gloss.

### Care Tex

Care Tex is a two-pack texture paint producing a very high surface resistance. The textured look covers minor defects in the substrate while increasing the scratch resistance of the surface. Care Tex can be supplied in any colour.



## Waterborne and solvent borne stains

### Waterborne stains

Kombi Ton and Uvo Ton are waterborne stains. In their basic form they are entirely free of solvents. They are light-fast, acid-proof and heat-resistant. Like all waterborne products, they may cause some fibrering, although this can usually be minimized with the right sanding technique.

Kombi Ton and Uvo Ton also have few colour limitations. The Sherwin-Williams tinting computer calculates the correct match for the selected substrate, making the actual nature of the substrate less important. Waterborne stains create a somewhat different stain effect than their solventborne counterparts. They are fast-drying and can be used on all types of wood substrate. It is generally true of all stains that application on newly sanded substrates gives the best continuous stain result. Coarse sanding produces a darker stain, fine sanding a lighter one.

### Kombi Ton

Kombi Ton is a relatively opaque, waterborne all-round stain, entirely free from solvents

in its basic form. This stain has virtually the same properties as older solvent-borne stains, but offers some environmental gains, not least a substantial reduction in solvent emissions.

Kombi Ton is the best stain system for dipping, but can also be applied by conventional spray or roller. It produces a smooth, uniform surface.

Kombi Ton offers an unlimited range of colour, from classical colours to pastel tones. The stain is available in qualities varying from totally transparent to almost opaque, sufficient to mask defects in the substrate.

### Uvo Ton

Uvo Ton is a waterborne stain, specially formulated for coating with UV lacquers. The stain film does not affect the curing of the UV lacquer, as conventional stains may do. Uvo Ton is made up of UV-stable dye stuffs and is available in most colours, in qualities ranging from transparent to fairly opaque.

### Solvent borne stains

The product group comprises fast drying stains, producing beautiful finishes. The solvents used in these stains are "milder" varieties, such as ethanol and mild esters – no aromatic hydrocarbons or glycols.

### Micro Ton

Micro Ton is an all-round stain for all types of fittings, home and office furniture and other. It produces a traditional soft stain effect on an even surface and in some cases it is somewhat opaque – while showing the texture of the substrate. Micro Ton is usually used as a mahogany stain but can also be used to great effect on beech, ash, oak and birch.

Even on low-grade veneer, using Micro Ton you can create a high-class surface, giving the impression of oak or mahogany. Micro Ton is applied by spray, rolling or dipping. It can be overcoated with all types of Sherwin-Williams clear lacquers, except for UV curing types. For pastel tints, select a non-yellowing lacquer.



## Oils and Waxes

The Sherwin-Williams oils and waxes are based mainly on natural raw materials. They produce a natural look, lustre and superior surface feel. They are used for items such as cupboards, tables, drawer pedestals and fittings. There is also a growing interest in treating wooden flooring with oil and wax products.

The Sherwin-Williams oils and waxes are adapted for modern industrial application techniques. They produce excellent results on most types of wood, especially pine and Nordic hardwood.

### Natura Oil

Natura Oil have been developed for industrial production, where rapid stacking is a requirement. The series comprises pure oils as well as waterborne qualities. Both types are designed for dipping, flow-coating or spraying. The coated items can be stacked immediately after application, as soon as the surplus oil has dried off or the surface has been brushed. A single treatment is normally enough. If a more saturated finish is required,

the item can be treated again after a few hours' drying (or, in the case of waterborne types, when the water has evaporated). Natura Oil offers excellent penetration, and the surfaces are completely dry after 4–5 weeks.

### Natura Wax

The products in the Natura Wax series are designed for spray, roller or wiping application. Heating of the surface, as with IRM, enhances pore penetration. After application, the surface must be brushed, since mechanical working of the surface helps the wax penetrate deeper into the pores. The treated items can normally be stacked immediately after application and brushing, without the wax being completely dry. For optimum surface resistance and appearance, we recommend two waxings, with brushing between coatings.

### Oil, wax or both together?

When selecting oil or wax, your choice will be determined by the appearance and degree of surface resistance you require, the type

of application equipment you have and the nature of the item you mean to treat. Oil results in a natural wood surface. With wax, you normally get a more highbody, lacquer-like finish. In many cases, it is best to work in two stages, first using Natura Oil as a primer and then applying a topcoat of Natura Wax. With this approach, you will avoid whitening of the endwood, which can arise with waxing alone.

### Lacroma Wax - One-coat treatment

This produces a waxed, natural looking finish, like a traditional lye-wax treatment. Lacroma Wax has been primarily developed for use on solid pine but is also highly suitable for use with other types of wood. Compared with conventional lye-wax treatments, Lacroma Wax offers excellent application and drying properties.



## Waterborne paints and lacquers for outdoor use

Paints and lacquers for wood that is partially or exclusively intended for outdoor use must satisfy demanding requirements. They must withstand ultra-violet radiation from the sun, rain, moisture and broad fluctuations in temperature but also discoloration from the wood. This applies to all outdoor wood, whether windows, doors, garden furniture or cladding.

Generally speaking, pigmented materials offer better resistance to UV degradation than lacquers. Most often, however, water and moisture cause the greatest problems. Since wood has a tendency to absorb water, there is constant movement in the wood substrate which makes the coatings flexibility of high importance. Wood with a high moisture content is vulnerable to rot and surface damage. All woods that are not resistant to rot should therefore be impregnated, as a first step, after which they should be coated with products designed for outdoor use – products made to withstand outdoor conditions. But for environmental reasons we suggest that you choose a durable wood quality instead of usage of VAC-impregnation. Industrial glazing, for example, as used for windows, often means lower production and finishing costs, and is easier to carry out.

However, windows treated in this manner require more frequent maintenance than those treated with paint. Painting is more expensive and slightly more complicated, but the gains in durability and finish are substantial. The type of paint and the system you select should be determined by factors such as the required quality of finish, ease of production, durability and environmental requirements.

### Testings

All products within the Laqvin range are tested to outdoor exposure to make sure they fulfill our high demands. Most of them also fulfill the EN927-1 requirements.

Many of our systems are also tested in tropical climate related to the L-joint standard test EN330. The test is carried out in the rainforest in Borneo/Sarawak Malaysia and will give us

answers about resistance against mould, rot and about the wood quality.

### Discoloration and knot-yellowing

All different wood types have more or less a tendency to discolorate the coating in different ways like tannin bleeding and/or knot-yellowing. But with Laqvin Proof you will be in pole-position by protecting your system from knot-yellowing. These products have also been evaluated in accordance with prEN927-7.

### Laqvin Waterborne primers, paints, sealers, glazes and lacquers

The waterborne Laqvin series is an environmentally compliant alternative for the treatment of outdoor joinery. Correctly used, these products offer excellent outdoor protection.



The Laqvin product range is based on different binders, mostly acrylics, alkyds and polyurethane dispersions. Available in various degrees of sheen, from matt to glossy, they can be used on most kinds of wood and have few colour limitations.

The Laqvin range can be supplied for use with most industrial spray techniques such as conventional-, HVLP-, "Airmix" or "Airless"-spraying but also for electrostatic application methods like high speed bell or disc application. Other application methods like flow-coat, Vacuumat or dipping can also be used.

### Laqvin Prime

Laqvin Prime is a range of primers for outdoor joinery. They offer high body/filling properties, good penetration, high flexibility and low water permeability values.

### Laqvin Proof

Laqvin Proof is an exclusive range of primers for outdoor products. It has the properties of Laqvin Prime but with an incorporated mechanism which delays/protects the wood from being discolored from pine knots and tannin from tropical woods.

### Laqvin Seal

Laqvin Seal is a transparent sealer, chiefly used as a first penetrating layer to increase the woods durability against fungicide decay and to prolong the resistance against blue stain. Laqvin Seal should be applied by flow-coat, Vacuumat or by dipping and should not be sanded after application/drying.

### Laqvin Ton

Laqvin Ton is a range of waterborne stains, very light-fast, for use on outdoor woodwork. They are available in most stain tones/colors, but less transparent stains are to prefer for a better outdoor resistance.

### Laqvin Clear

The Laqvin Clear family comprises filmforming products (which produce high-bodied finishes) as well as products which penetrate the substrate without forming a film. The latter can be used, for example on surfaces stained with Laqvin Ton, to improve resistance to water absorption. The film forming products in the Laqvin Clear range are intended to give coating systems with good scratch resistant, minimal water whitening effect, good UV-durability and high flexibility. For outdoor use, a tinted lacquer is recommended, unless the items to be coated are of minor importance or well protected. Tint-

ing extends the useful life of the finish and products are available from low gloss (matt finishes) to high gloss.

### Laqvin Top

Laqvin Top is a range of pigmented topcoats for outdoor joinery, which give your pigmented products the final layer of outstanding protection and outlook. They offer very high flexibility and high durability against loss in gloss and colour change when exposed to weather.

### Laqvin Fast Dry

We can also offer some of the most advanced systems on the market for coating claddings. The systems are radically different, yet both offer an unparalleled combination of short drying times and high quality surfaces. Separate information material is available on demand.

We have designed different products for different needs in this range, to fulfill the high demands for exterior coatings, but with properties and balance to make them suitable for different line designs and with the properties you want to be highlighted. These products are included in our "Tinting-system" which helps you to achieve the colour you want with very few limitations and with variations from low to high gloss.



## Solvent borne paints and lacquers for outdoor use

### Reafen

#### High-grade polyurethane products

The Reafen range consists of two-pack polyurethane products giving the very best outdoor properties. Producing surfaces with a high resistance to chemicals and abrasions, they also reduce knot resin from penetrating the film. Reafen surfaces also offer a high-bodied, colour-proof finish, with a low degree of chalking.

### Reafen Prime

Reafen Prime are primers with a very high build and good sanding properties. They are excellent primers under waterborne and polyurethane paints. They also produces good results on most kinds of wood and exterior-quality board. Reafen Prime can be sprayed, has a low degree of fibre raising and can be used wet-on-wet with a topcoat.

### Reafen Top

Reafen Top is a paint that is up to the stiffest demands of build and weather conditions. It has excellent resistance and is stable in colour and gloss.

### Vindu

The Vindu outdoor range consists of one- and two-component alkyd based products. They are very production friendly with a very fast drying process, attractive surface finish and with a proven durability for outdoor use since more than 30 years. The products can be used on different surfaces for outdoor use, such as board materials and a variety of woods.

### Vindu Oil, Seal & Ton

Vindu Seal and Oil are mainly non filmforming products which are sealing and protecting the wood from decay and mildew attack. These products can be tinted in any desirable colour to achieve longer exterior durability.

### Vindu Clear

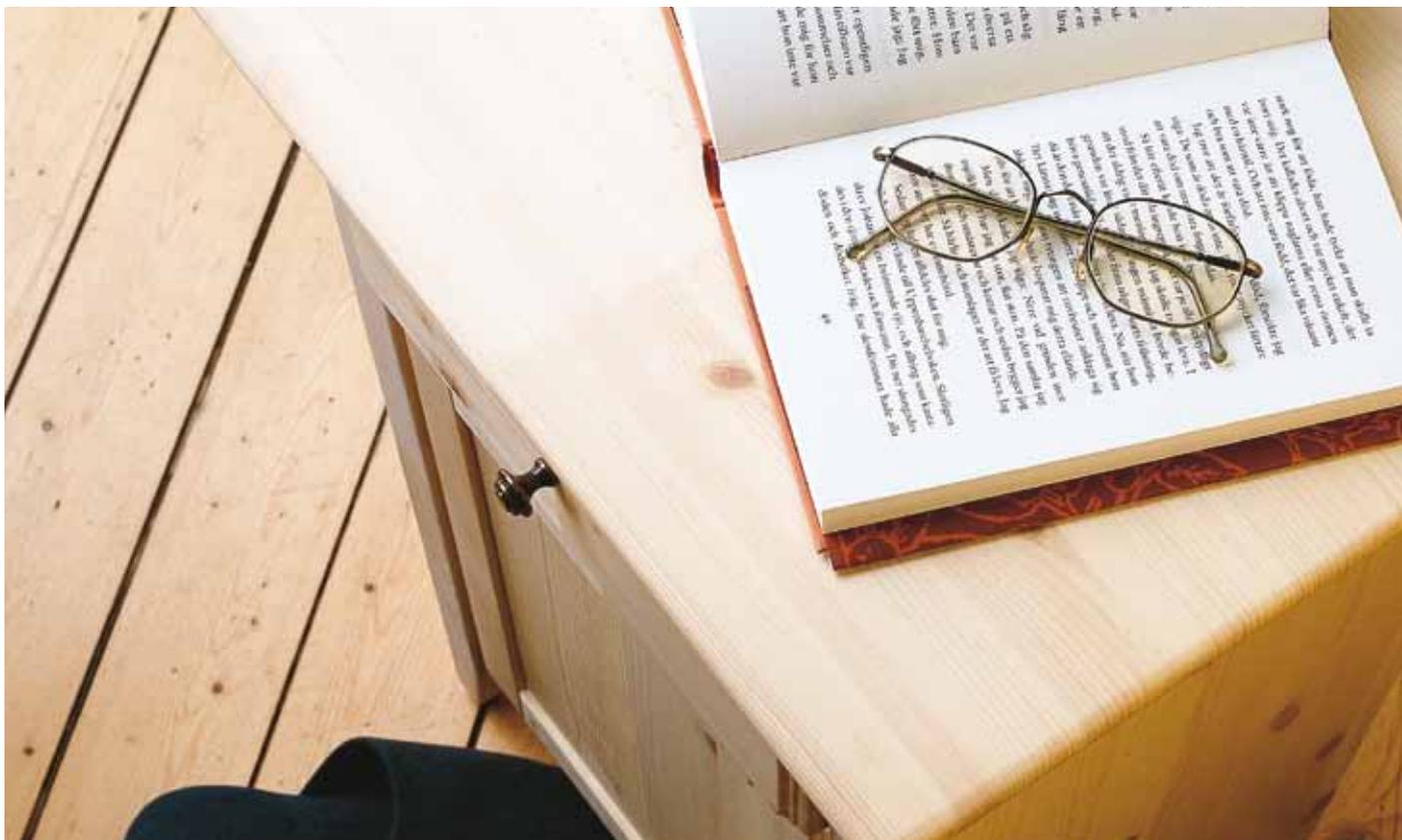
Vindu Clear is a range of low to medium film-forming products, to be applied on Vindu Seal and Ton. These products are increasing the exterior durability by improving water and UV resistance and to withstand dirt retention.

### Vindu Prime

Vindu Prime is two-component primers which are specially developed to be used for exterior doors made from board material (HDF). The products are very fast drying and give high body with good sandability.

### Vindu Top

The Vindu Top range is pigmented products aimed to be applied on Vindu Prime. They are available in different gloss and can be tinted in any desirable colour. The fast drying in combination with high flexibility and high body makes it very attractive for outdoor use.



## WoodWash – protects and preserves that natural look

WoodWash is a specially developed wood finishing concept which inhibits and delays the yellowing process that traditionally affects pale woods like pine and spruce.

The difference between WoodWash-treated and untreated wood is almost unnoticeable, because WoodWash protects and preserves that natural pale look, while retaining the texture of newly sanded wood.

### Inhibits yellowing

It is not just the wood that is affected by yellowing. Traditional lacquering systems also yellow gradually through time. Treatment with WoodWash counteracts this and makes it possible to retain the fresh, natural look of the wood for a long time.

WoodWash itself does not yellow. On the contrary, after a long period of uninterrupted exposure to light, the most that happens is a hint of greying, resembling the look of beautiful soap washed wood.

### Flexible application and cost-effectiveness

WoodWash offers both flexibility and rational operation in wood finishing. Normally, no additional investment or changes to the application line are required. WoodWash can easily be adapted for application with existing equipment. Technically convenient and extremely cost-effective.

WoodWash can be sprayed as a single or multi-coat finish, or applied by roller. There are many combinations, for maximum flexibility. The treatment gives surface protection on a par with the equivalent conventional finishes.

### Can be used in different systems

WoodWash is available in different qualities, depending on the system you prefer and the degree of protection required. The recommended amount applied for an optimal WoodWash finish depends on the quality and the application method you choose.

### Gives a naturally finish

WoodWash is recommended for finishing items such as furniture, cupboard doors and fittings, in short, wherever you want the natural effect of untreated wood. Since WoodWash treatment has an equalizing effect on the substrate, it is also easier to combine surfaces made of different pale woods, such as pine with birch and ash.



## WoodPrint - enhance and beautify the surface

### WoodPrint technology

Sherwin-Williams WoodPrint technology gives board and plain veneers a convincing wood image. These roller-applied finishes provide a natural imitation of birch, beech, maple, oak and most other wood veneers. The result is amazingly natural. You can hardly see the difference, between real wood and Sherwin-Williams WoodPrint.

The technology can be applied to most flat surfaced substrates, e.g. tabletops, kitchen doors, floor boards and even mouldings. This is a highly effective way of surface finishing, providing exceptionally wide variability between cost per square meter and quality.

### Three-step system

WoodPrint can be applied in many different ways, depending on local conditions, although the systems are alike in principle. The substrate is sealed and primed, after

which – depending on design and complexity – one to three “print rollers” are used to create the actual wood image. A top lacquer is then applied to protect the finish.

The Sherwin-Williams range can offer both 100% UV, conventional waterborne and waterborne UV WoodPrint systems.

### Benefits of WoodPrint

- > Efficient production.
  - Fast refining process (all steps from sanding to final surface in the same line).
  - Less production losses as compared to veneer and foil.
  - No need for expensive stock of veneer or foil.
- > Lack of high quality veneers on the market make WoodPrint a good alternative.
- > Large flexibility with respect to patterns and colours.
  - Many different wood images can be

produced with the same rollers.

- > Large flexibility with respect to fashion, full-colour production can be mixed with wood printing in the same finishing-line.
- > WoodPrint images are very lightfast and do not have the natural woods tendency to change in colour when ageing.
- > Applicable for wide range of demands, from “cheap” to “high quality” objects.

### WoodPrinting vs. melamine

WoodPrint proceeds in a similar way to the manufacture of melamine foils but is done directly on the furniture board in the lacquer line. This eliminates a lot of side-costs and losses, typical of melamine. Cost of paper (foil) as a main medium of printing is eliminated together with the cost for manufacturing, transport and storing. Also, the losses when cutting the right format of foiled boards are eliminated.



## Technology

The WoodPrint method uses the standard roller coating technology for UV-curing paints, in which is incorporated a roller printing section. The whole process is similar to the common furniture lacquer UV-line. It is possible to use WoodPrint surface finishing on different kinds of substrates (chipboard, MDF, hardboard and veneers).

Quality, meaning the appearance and parameters for surface resistance, can be influenced according to requirements and technological possibilities, by using either waterbased primers, inks and top coats, or UV versions and in some cases a mix of both. By varying the number and thickness of the coats (layers), as by customizing the individual products, we can provide solutions that will fit most requirements in a very cost effective way.

Printing can be done, according to the required surface quality, resistance and colour, straight on the substrate (e.g. fibreboard, MDF board etc.), on different board qualities and on cheap veneers to improve the wood texture.

You would be able to reach the surface resistance complying with the requirements

for desk-tops, sideboards or even wooden floor boards. WoodPrint itself is performed on equipment consisting of 1-4 print heads. Each head consists of a steel roller with an engraved wood texture and a rubber application roller that transfers the texture over to the substrate. On each head circulates specific printing paint (ink). The different heads are precisely synchronized and they all contribute to the final image.

The graphical possibilities of WoodPrint are enormous and it depends only on the range of engraved patterns and your own choice of colour.

From our experience, we know that the paint loss is only 5% under normal circumstances. The ink exchange takes 20 minutes, changing the engraved roller takes one hour, so the time consumption when changing the paint or cleaning the machine are comparable to a normal roller coater line.

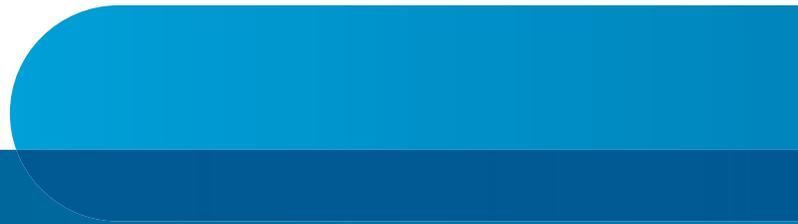
A UV-line for finishing of furniture chipboards in standard quality consists of 6-9 rollers, one printing section, sanding machines and 8-10 UV-curing zones. Working speed is up to 45 m/min.

## Objects that can be WoodPrinted

- > Table-tops
- > Kitchen doors
- > Backs of drawers and bookshelves
- > Interior doors
- > Floors
- > Cupboards
- > Mouldings
- > Actually almost every flat surface

## Substrates

- > Chipboard
- > MDF
- > Hardboard
- > Veneers



### **Sherwin-Williams – Your Coating Solutions Partner**

The Sherwin-Williams Company (SHW), through its Product Finishes Division, is an industrial coatings leader that delivers local finishing solutions on a global scale to OEMs and tier suppliers. Comprised of coatings professionals dedicated to providing unparalleled customer support, Sherwin-Williams brings value to the finishing process through solutions like on-site technical assistance, customized products, colour and design services, and process improvement expertise. With innovative liquid and powder coating technologies to protect wood, metal and plastic, as well as finishing equipment and supplies needed for coatings application, Sherwin-Williams utilizes an infrastructure spanning six continents to provide better finishing solutions for manufacturers.